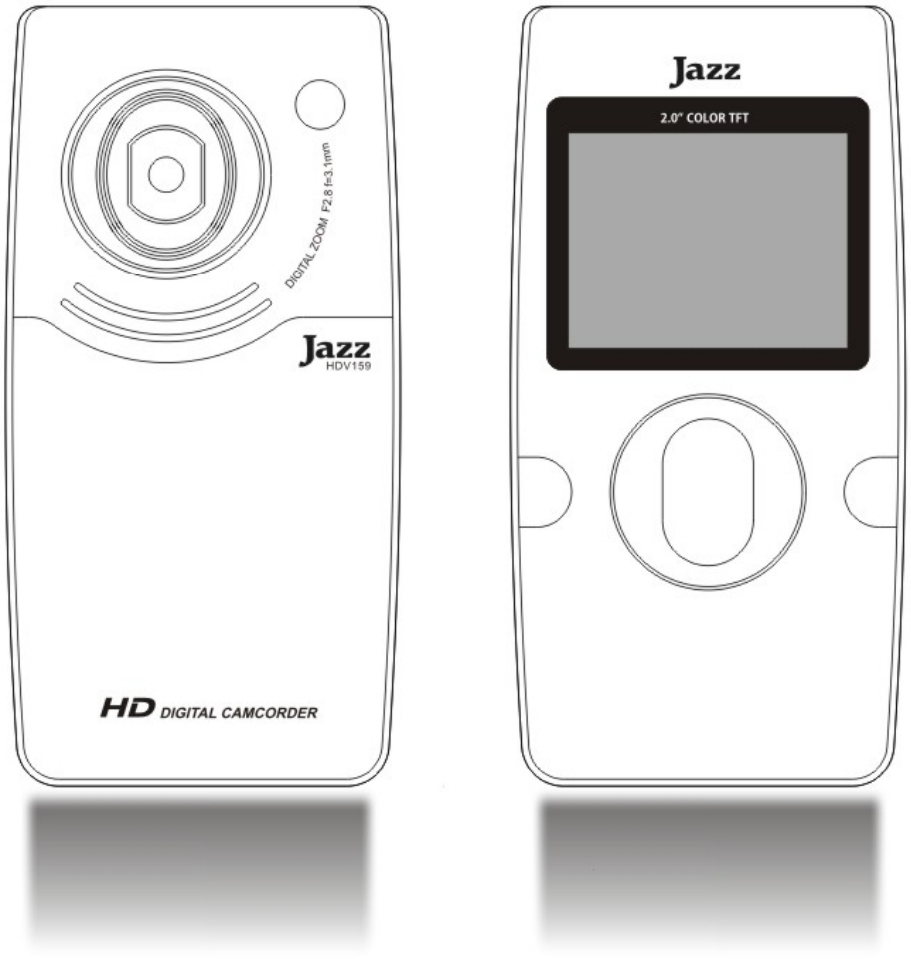
Digital Video Camcorder
User's Manual



Contents

Contents.....1
FCC statement.....2
Function Description.....3
Notice for use.....3
System requirements.....4
Standard accessories.....5
Start to use.....6
1. Appearance and Buttons.....6
2. Basic operation.....8
An Application Software.....21
Software installation.....21
Xvid codec Installation.....22
MediaImpression Installation and Using.....24
Product specifications.....30

FCC STATEMENT

FCC part 15.21

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC part 15.105

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

Pertinent testing documentation is available for verification.

Function Description

Before using your new digital video camera please read this user manual carefully.
Your digital video camera will take video clips and still photos and playback the taken video and photos. Captured video and images may be downloaded from the digital video camera to your PC for permanent safe-keeping. This user manual was printed based on latest specification information. The screens and illustrations in this user manual have been designed to particularly describe and visually detail the operation of the digital video camera. Due to technological development and latest production enhancements, your version of the digital video camera may differ slightly from that shown in this edition of the manual.

Notice for use

General:

1. Do NOT open the housing of the camera,
2. Damp, pressure, collision and overheating may damage this digital video camera.

Memory and storage:

1. SD/MMC/SDHC cards (not supplied with camera) are required to store images.
2. Camera accepts SD/SDHC memory cards with 8GB max capacity.
3. When SD/MMC/SDHC card is inserted, the internal memory of the camera is not active; the camera will store all images, video on the SD Memory card.
4. SD card has a write-protection switch, which can be used to prevent inadvertent deletion of data. Set the switch to LOCK position to protect stored data, but for taking pictures and video, the switch must be set as non-LOCK position.
5. Memory cards should not be used for permanent storage of data. You should copy the files in the digital video camera to a permanent storage location.
6. When saving files in the memory or the memory card, make sure that the file size does not exceed the maximum capacity of the memory.

Maintenance and care:

1. Attach and use the wrist strap connected to the camera, otherwise camera can fall and become damaged.
2. Take care and avoid scratching the lens and LCD screen.
3. To clean the lens, firstly blow away the dust on its surface, then use soft cloth or tissue for optical devices to clean the lens. Do NOT use organic cleanser to clean lens or the camera.
4. Avoid touching the lens and the LCD screen.
5. When not using the digital video camera for extended period please remove the battery from the camera.

Other notices:

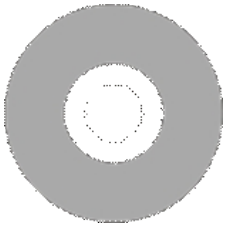
1. This digital video camera is suitable for use in ambient temperatures 0℃- 40℃ (32℉-104℉). Do NOT keep the digital video camera in environment with extremely high temperature, such as in a car parked in hot sunlight. Avoid dust, water and other liquids or chemicals. To avoid condensation forming in the camera when moving device from a cold (e.g. outdoors) to a warm place (e.g. indoors), protect it in sealed plastic bag, and remove only when the camera reaches the ambient indoor temperature.
2. Li-ion battery may be recharged many times. However, final disposal should be made according to local regulations
3. TV programs, movies, music, images and other content sources and certain locations may be protected by copyright. Therefore avoid shooting/using without prior permission if such action may violate copyright laws and regulations. Please note that resources under protection of copyright can be used with permission under related laws and regulations.

System requirements

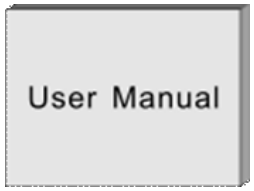
When operating and using this digital video camera, ensure that it meets the requirements of the computer system used. It is strongly recommended to use the best computer units to operate the camera so as to bring its functions into full play. Below are the requirements of the basic computer system:

Operation System	Microsoft Windows 2000,XP, Vista, Windows 7
CPU	Above Intel PIII 1GB or CPU of equal performance
Memory	Above 256 MB
Sound card and display card	DirectX8 or above.
CD-ROM	4× speed or above
Hard Disk	1 GB space above useable
Other	One standard USB 1.1 or USB 2.0 port

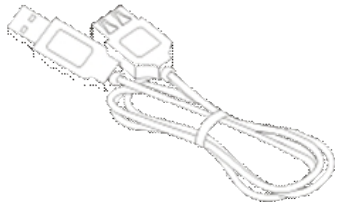
Standard accessories:



Installation CD



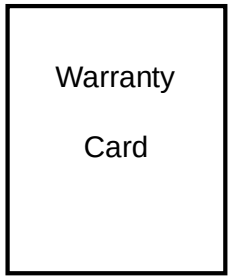
User manual



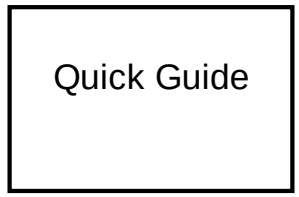
USB extension cable

TV cable

Li-ion Battery



Warranty Card



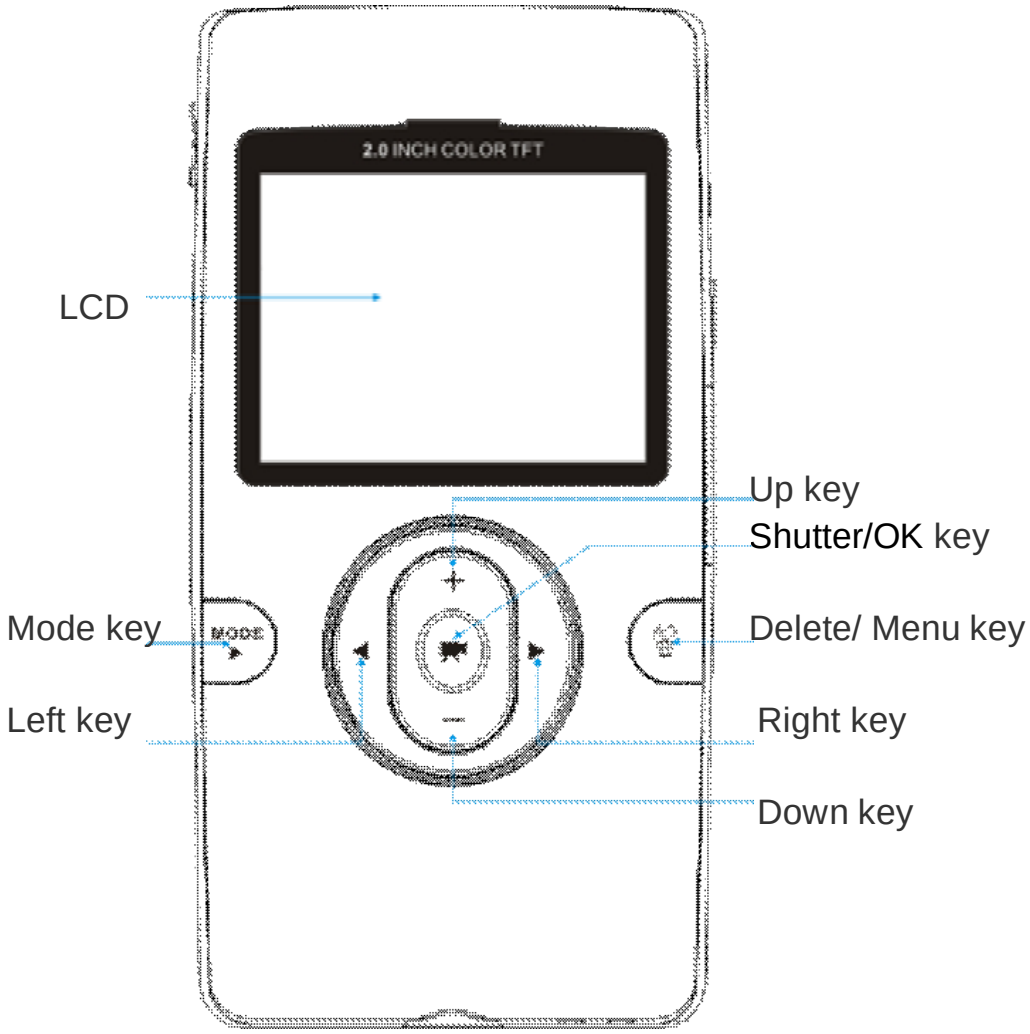
Quick Guide

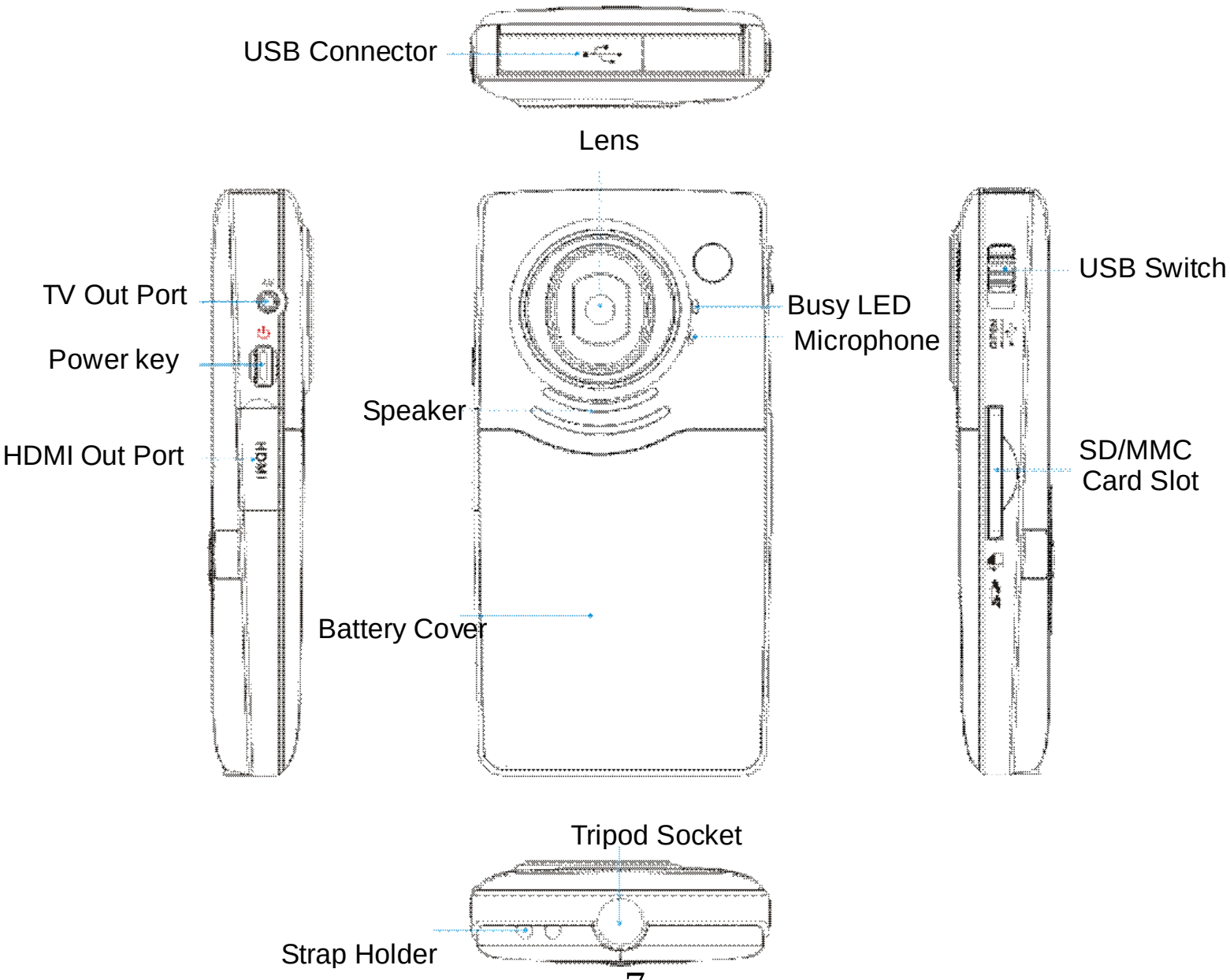
Hand Strap

Pouch

Start to use

1. Appearance and Buttons

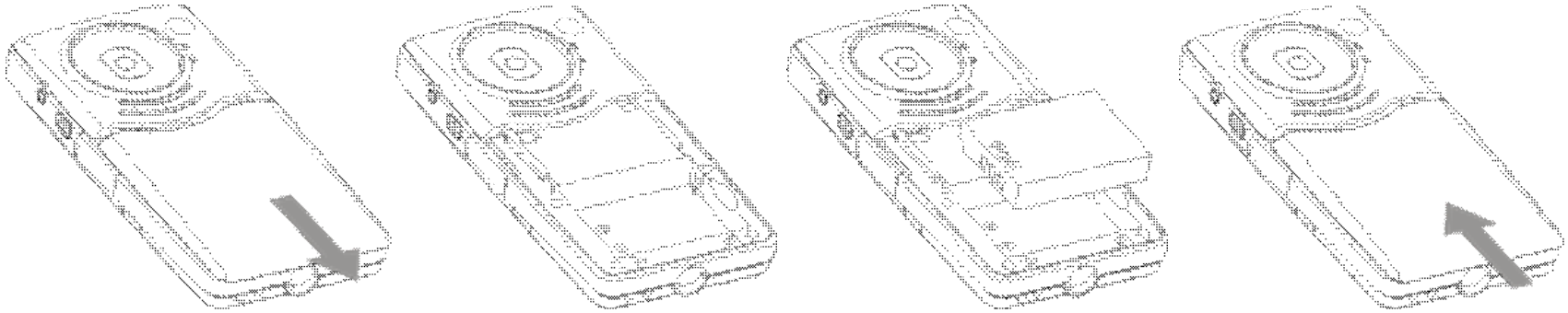



USB Connector
Lens
TV Out Port
Power key
HDMI Out Port
Speaker
Busy LED
Microphone
USB Switch
SD/MMC
Card Slot
Battery Cover
Tripod Socket
Strap Holder

2. Basic operation

2.1 Install battery

Press / slide down the Battery Cover and insert lithium battery. Align with correct polarity of battery terminals. Close the Battery Cover.



2.2 Charge Battery

1. Power off the camera.
2. Connect the camera to the computer USB port to charge the battery.
3. During charging, busy light remains on and turns off when the battery is fully charged.

2.3 Use SD/MMC/SDHC card

Internal / External Memory options:

Your digital video camera has limited built-in *Internal Memory*, and a slot for *External SD Memory Card*.

*SD Card – when it is NOT inserted digital video camera will store all video, images on the Internal Memory.

- Limited Internal Memory only stores several tens of images or video less than 1 minute.

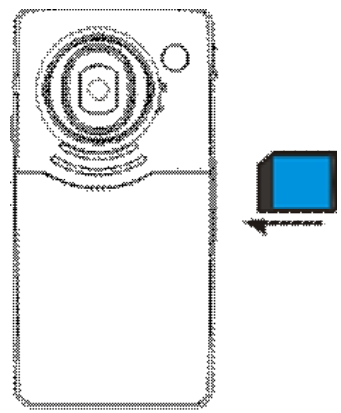
*SD Card – when it is INSERTED digital video camera will store video, images only on the SD Memory Card.

- SD Card allows storage of tens minutes of recorded video or hundreds of still images.

Insert / Remove the SD Card

Insert the SD Memory card into the SD/MMC/SDHC Card Slot. Push it down until the card stays latched. Do not force – check card's position according to the position mark on the camera.

Push and release inserted card if you wish to remove or replace the card.



Turn your camcorder OFF before inserting / removing the SD Card.

- Note that the SD Card has a tiny LOCK switch on the side. Set the switch to un-LOCK position to be able to store recorded videos and still pictures on inserted SD Memory Card.

Formatting the memory card

The SD card has to be formatted first: After pressing Power key to turn the camera ON, press Delete/ Menu key to enter Setup Menu. Press Up or Down key to select ‘Format’ option. Press Shutter/OK key or Right key to enter a sub-menu displaying ‘Internal Memory’ and ‘SD Card’ options. Press Up or Down key to select ‘SD Card’ option and then press Shutter/OK key. Press Up or Down key to select ‘OK’ option and then press Shutter/ OK key. The memory card will be formatted automatically.

Note:

1. If ‘Internal Memory’ option and then ‘OK’ option is selected, built-in Internal Memory will be formatted after pressing Shutter/OK button.
2. Formatting card or built-in Internal Memory will **erase** all previous data. Download any valuable data, file or video **BEFORE** formatting.

2.4 Turning the camera ON and OFF

- With the battery inserted and charged, press and hold the Power Key to turning ON the camera.
- Press the Power Key again if you wish turning OFF the camera.

- When the camera is ON and active, the camera will remain idle for 1 minute (default) before turning the power OFF automatically to save battery power.
- When the camera is ON and active but the battery level is very low, the camera will turn OFF power after several seconds. You must then replace or recharge the battery.

2.5 Setup menu

- How to get an access to the Menu list

When the camera is in video recording or photo taking mode, press Delete/ Menu key. The Setup Menu appears on LCD screen.

In Video Recording Mode, the Setup Menu has the following options:

Main Menu	Sub-menu	Description
Language	English	Set the menu language to English
	Deutsch	Set the menu language to German
	Français	Set the menu language to French
	Español	Set the menu language to Spanish

	Italiano	Set the menu language to Italian
	Português	Set the menu language to Portugese
	简体中文	Set the menu language to Simplified Chinese
	繁體中文	Set the menu language to Traditional Chinese
Format	Internal Memory	Format Internal Memory of the camera
	SD Card	Format SD Card inserted in the camera
TV Mode	NTSC	NTSC TV System is selected (default)
	PAL	PAL TV System is selected
Frequency	50Hz	Select 50Hz electric light frequency
	60Hz	Select 60Hz electric light frequency (default)
Date & Time	Date, Time and format of date are displayed	Set the Date, Time and format of Date of the camera (see below).
Auto Power Off	Off	Power stays on until the user presses Power key to turn off the camera.
	1 Minute	Power turns off automatically if camera is unused for 1 minute.
	3 Minute	Power turns off automatically if camera is unused for 3 minutes.

Beep Sound	Off	No beep sound is heard when pressing any key.
	On	Beep sound is heard when pressing any key (except Power key).
Default Setting	Cancel	Cancel the resetting function of the camera to default values
	OK	Reset settings of the camera to default values
Version		Version of firmware installed in the DV is displayed

In Photo Taking Mode, the Setup Menu has the following options:

Main Menu	Sub-menu	Description
Self-timer	Off	Cancel the 10 sec delay self-timer function
	On	Activate the 10 sec delay self-timer function
Language	Same options as the Setup Menu in Video Taking Mode.	
Format		
TV Mode		
Frequency		
Date & Time		

Auto Power Off	
Beep Sound	
Default Setting	
Version	

To set any option in the Setup Menu, use Up / Down key to highlight the desired option in the Main Menu and press Shutter/OK or Right key. Then use Up / Down key to select the desired option in the Sub-menu. Press Shutter/OK key to confirm setting or press Left key to return to the Main Menu without confirming setting.

Setting Date & Time

Use Up / Down key to highlight “Date/Time” and press the Shutter/OK or Right Key.

Press Left/ Right key to highlight the item that needs to be set: year, month, day, hour, minute, second, and format of date.

Press Up or Down key to adjust the value or option and press Shutter/OK key to confirm setting.

Viewing firmware version

To view the number (version) of installed Firmware, press Up / Down key to highlight "Version" option and then press Shutter/OK or Right key.

To leave the Setup Menu, press Delete/ Menu key.

2.6 Selecting the Mode of the camera

Camera has three available modes:

- Video Recording Mode
- Photo Taking Mode
- Playback Mode.

After turning the camera ON it will stay at the Video Recording Mode (default).

Press the MODE Key if you wish to change or select another Mode.

2.7 Video Recording Mode

In Video Recording Mode, press the Shutter Key to start video recording.

Press Up or Down key to zoom the image in or out.

Press the Shutter Key again to stop recording.

Before starting Video recording you may press Left or Right key to select / change the required video resolution: HD (1280x720) or VGA (640x480).

2.8 Photo taking mode

In Photo Taking Mode, press the Shutter key to snap one photo

Before taking picture you may press Left or Right key to change / set the required photo resolution: 5Mpix (2592x1944), 3.1Mpix (2048x1536) or 1.3Mpix (1280x960)

Press Up or Down key to zoom the image in and out.

Note:

- Camera will not record the video or take a photo when the SD Card is FULL or LOCK-ed..
- Turn camera OFF then replace or un-LOCK the SD Card.

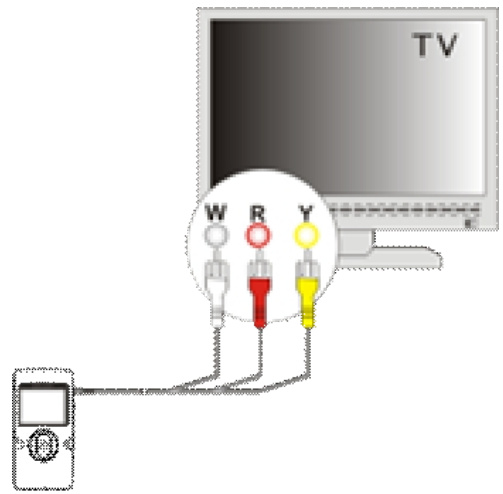
2.9 Playback Video or Photos

Press the Mode Key to select the Playback Mode; the LCD screen will display last recorded video or photo. Use ◄ or ► keys to browse or select another file.

- After the Video file is selected, press the OK Key to start playing Video; press Mode Key if you wish to stop playing.
- During playing the Video you may press / hold ► or ◄ key to “fast forward” or “rewind” played Video, or press the OK Key to pause / resume playing. Press Up or Down key to adjust the volume of audio sound.
- After the Still photo is selected you may use Up / Down key to “zoom” the image.
- While in the “zoom” mode, you can enter the “pan” mode by pressing the OK Key. Use the directional key for “panning” through the displayed photo.

2.10 TV output

You may use standard TV to review recorded video or still images. When the camera is powered and active, use supplied AV cable and connect camera to the TV. Follow colors of the connectors and ports; use yellow (Y)



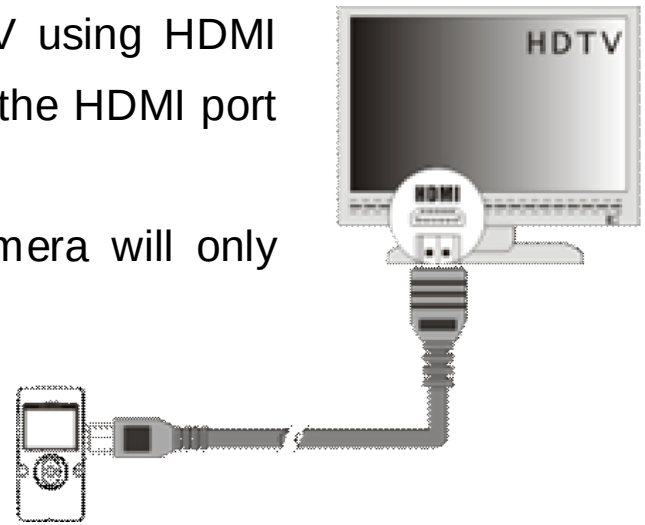
cable attached to the VIDEO IN of your TV, and red (R) and white (W) connect to the AUDIO IN port on TV.

Set your TV to the Video In Mode and use camera's key to navigate or select images.

2.11 HDMI output

You may also attach camera to the High definition TV using HDMI cable (not supplied with camera). Connect the cable to the HDMI port on the camera and to the HDMI port on your TV.

Note: When connected with the HDMI cable, the camera will only operate in the Playback mode.



3 Delete files

When in preview or the Playback Mode press the Delete key to activate Delete options. Use direction keys Left or Right to select “All”, “No” or “Yes” option.

Select “Yes” then press OK key to delete current image;

Select “No” then press OK key to exit deletion;

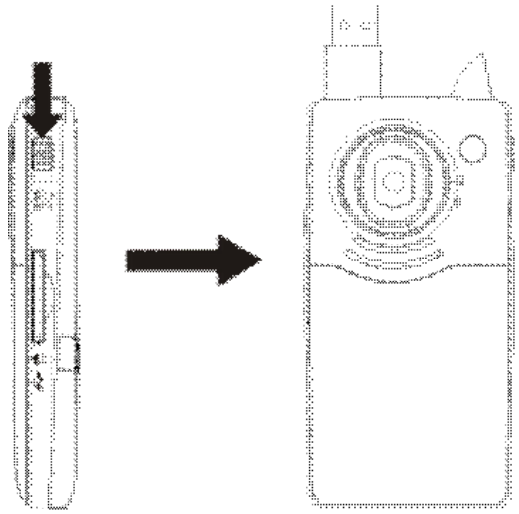
Select “All” then press OK key to select deleting all images. A sub-menu is displayed on LCD, asking if the user confirm executing ‘Delete All’ function. By selecting “Yes” using Left / Right key and then pressing OK key, all images will be deleted.

4 Connect to PC

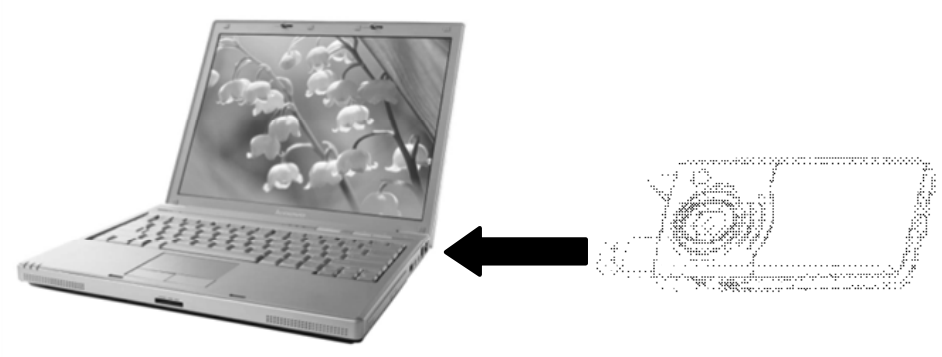
1. Slide the USB Switch to OPEN direction as indicated by the icon next to USB Switch to extend the USB connector from the camera, then turn the power ON.
2. Insert camcorder USB connector into computer’s USB port, or use supplied USB extension cable to make connection.

5 Download files from camera to PC

After connecting to computer, go to "My Computer” and open the "Removable Disk." Recorded video and photos will be saved in the \DCIM\ 100MEDIA folder in the removable disk. Choose the desired file in the 100MEDIA folder and copy (drag with mouse) it into the selected folder, then “Save” file in your computer.



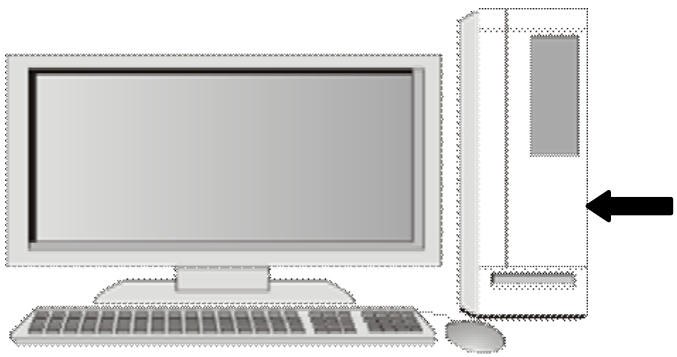
▲ Open USB port



▲Direct connection to PC

or

▲ Using the USB extension cable



Note: Depending on version of your camcorder the computer may display one or two "Removable Disc" units.
*One (from two displayed) "Removable Disc" represents camera's EXTERNAL / inserted SD Card Memory

- Open selected "Removable Disc" then select DCIM / 100MEDIA folder.
- Open 100MEDIA folder to see all captured images / video files.
- You can click to play / review selected records and / or store valuable records inside computer's memory.
- Copy or drag files into the folder "*where"* you wish to save your records.

*Second (from two displayed) "Removable Disc" represents camera's INTERNAL MEMORY and may store less images or few seconds of the recorded video.

An Application Software

Two programs are bundled on the supplied installation CD:
Xvid codec and ArcSoft **MediaImpression**.

- The "**Xvid codec**" is the program necessary to playing back recorded Video, especially those recorded at the High Resolution format. If you have this application installed in your computer, it is not necessary to re-install it from the CD.
- The **"MediaImpression"** program will help you download video and will give you the "one click access" to YouTube: - share your own recorded video with millions people over the Net!

Software installation

Insert the supplied CD into the CD-ROM of the computer, then the following menu will appear:

- If the CD driver does not automatically carry out or close such function, please double click **autorun.exe** program under the root directory of the CD.

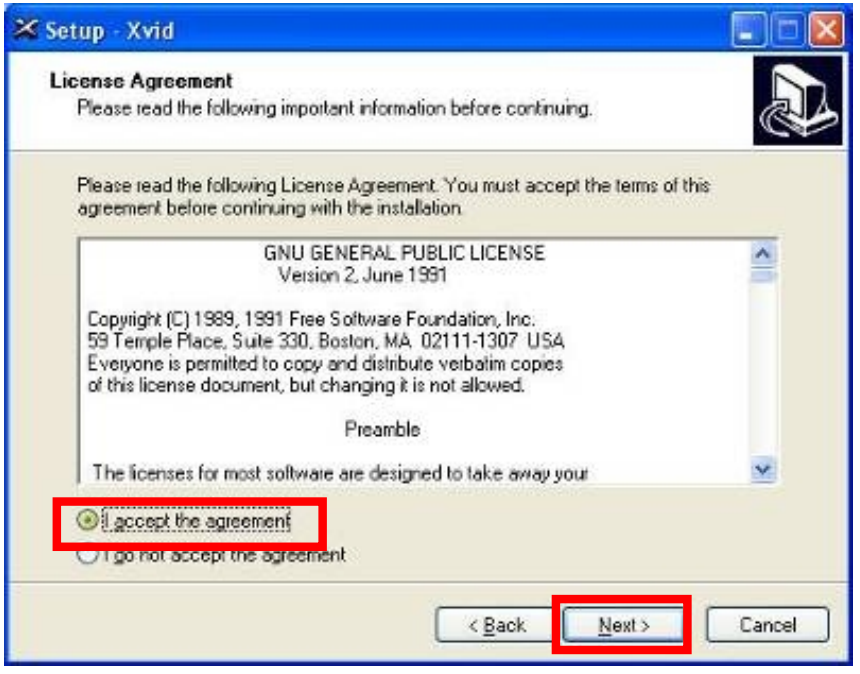
Xvid codec Installation

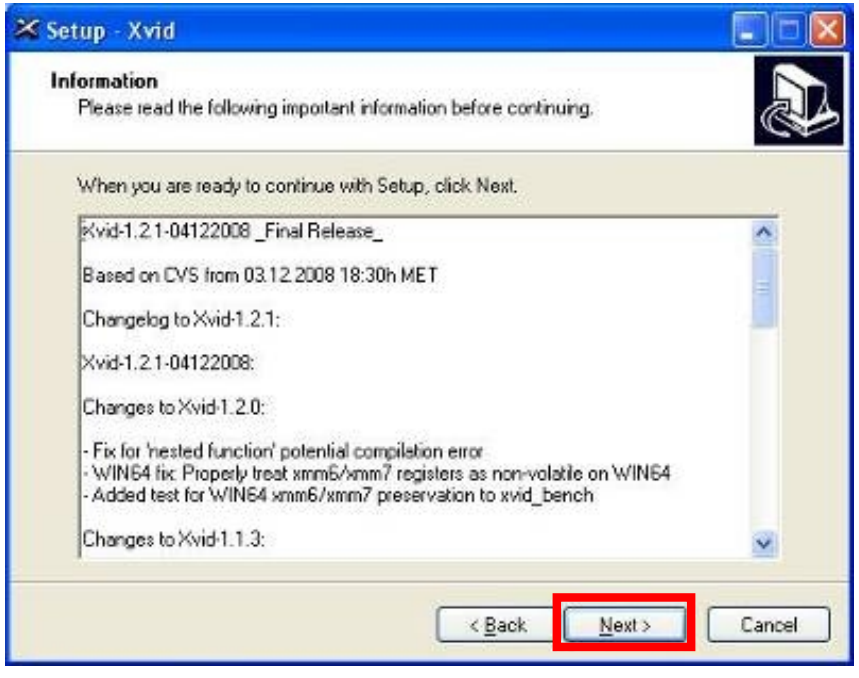
(Skip this installation if your computer has the “Xvid codec” installed already.)

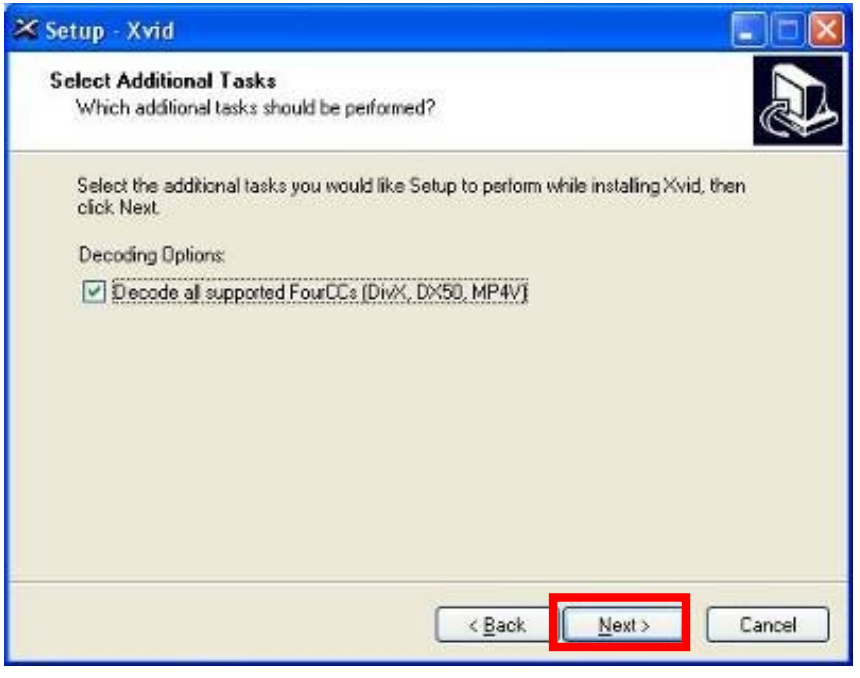
Install Xvid codec:

Click ” Install Xvid codec “ button and complete the installation as per the tips.

Setup - Xvid
Welcome to the Xvid Setup Wizard
This will install Xvid MPEG-4 Video Codec on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel


Setup - Xvid
License Agreement
Please read the following important information before continuing.
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991
Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
Preamble
The licenses for most software are designed to take away your
I accept the agreement
I do not accept the agreement
< Back
Next >
Cancel


Setup - Xvid
Information
Please read the following important information before continuing.
When you are ready to continue with Setup, click Next.
Xvid-1.2.1-04122008 _Final Release_
Based on CVS from 03.12.2008 18:30h MET
Changelog to Xvid-1.2.1:
Xvid-1.2.1-04122008:
Changes to Xvid-1.2.0:
- Fix for 'nested function' potential compilation error
- WIN64 fix: Properly treat xmm6/xmm7 registers as non-volatile on WIN64
- Added test for WIN64 xmm6/xmm7 preservation to xvid_bench
Changes to Xvid-1.1.3:
< Back
Next >
Cancel


Setup - Xvid
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing Xvid, then click Next.
Decoding Options:
Decode all supported FourCCs (DivX, DX50, MP4V)
< Back
Next >
Cancel

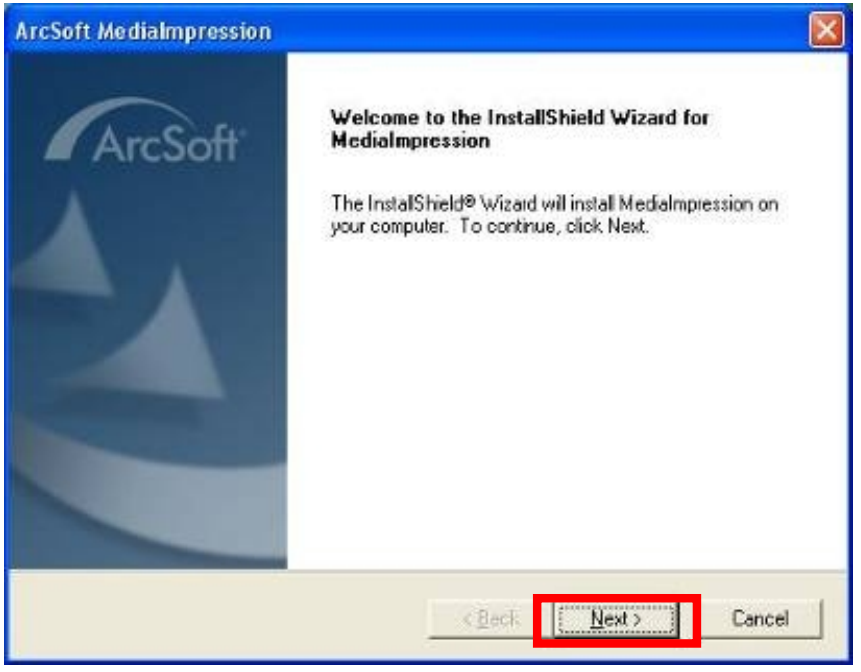
Setup - Xvid
Completing the Xvid Setup Wizard
Setup has finished installing Xvid on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Finish

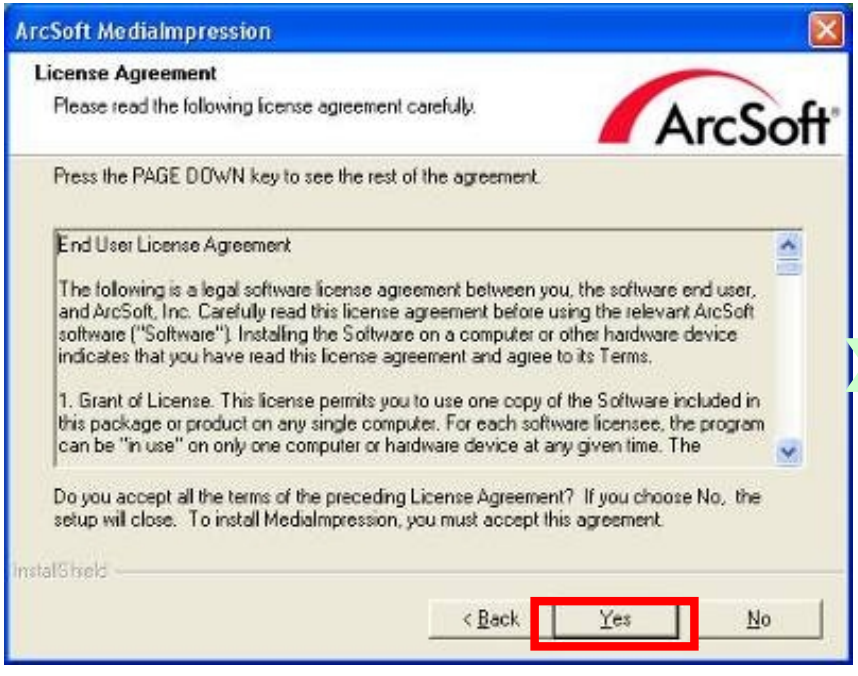
MediaImpression Installation and Using:

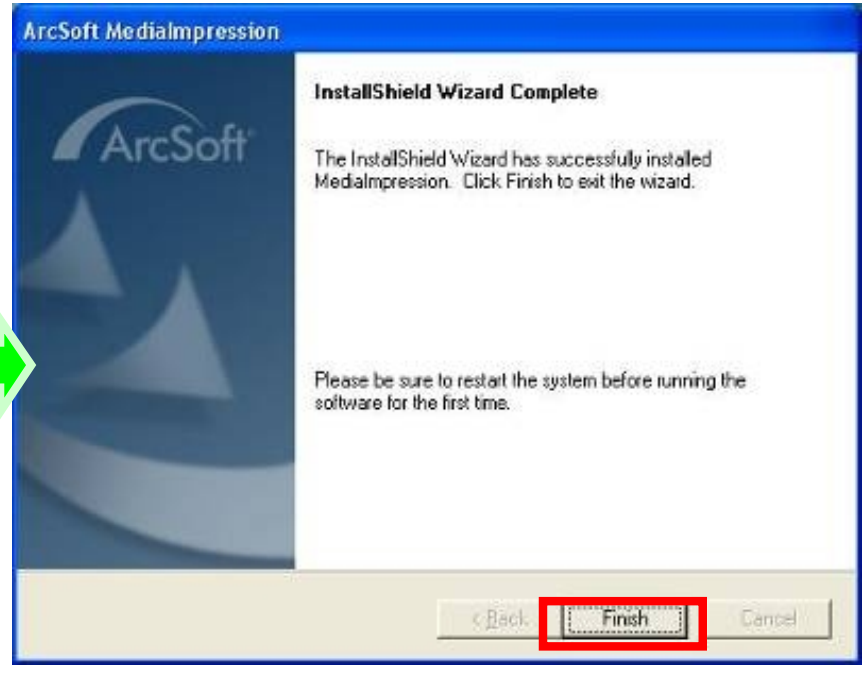
Install Mediainpression:

Click “Install MediaImpression” button and complete the installation steps.

Choose Setup Language
Select the language for this installation from the choices below.
English
OK
Cancel


ArcSoft MediaImpression
ArcSoft
Welcome to the InstallShield Wizard for MediaImpression
The InstallShield® Wizard will install MediaImpression on your computer. To continue, click Next.
< Back
Next >
Cancel


ArcSoft MediaImpression
License Agreement
Please read the following license agreement carefully.
ArcSoft
Press the PAGE DOWN key to see the rest of the agreement.
End User License Agreement
The following is a legal software license agreement between you, the software end user, and ArcSoft, Inc. Carefully read this license agreement before using the relevant ArcSoft software ("Software"). Installing the Software on a computer or other hardware device indicates that you have read this license agreement and agree to its Terms.
1. Grant of License. This license permits you to use one copy of the Software included in this package or product on any single computer. For each software licensee, the program can be "in use" on only one computer or hardware device at any given time. The
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install MediaImpression, you must accept this agreement.
InstallShield
< Back
Yes
No


ArcSoft MediaImpression
ArcSoft
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed MediaImpression. Click Finish to exit the wizard.
Please be sure to restart the system before running the software for the first time.
< Back
Finish
Cancel

After installation, please restart the computer.
Run MediaImpression :

Double click the

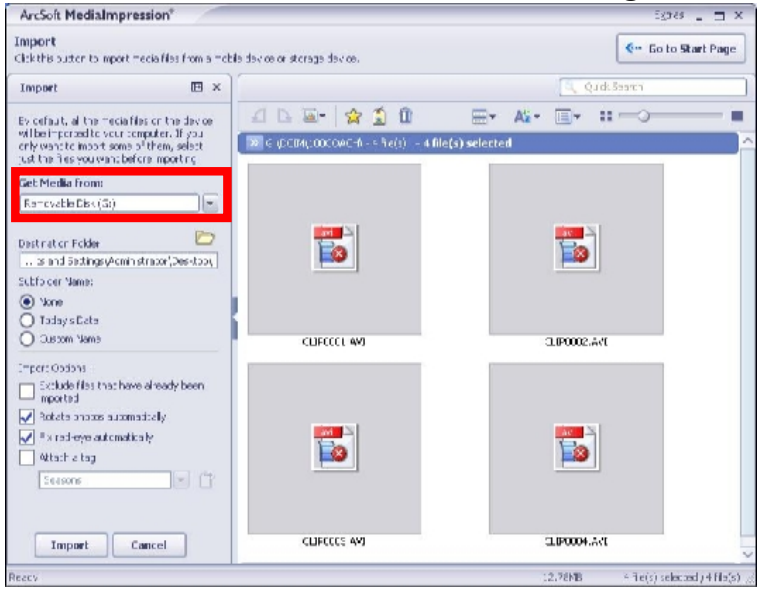
icon on the desktop or follow “Start → Programs” to open:

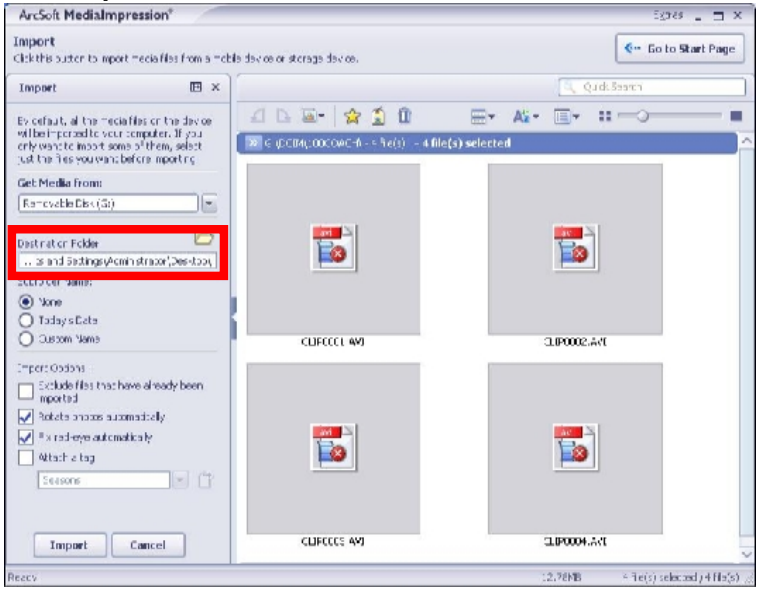
MediaImpression

After starting MediaImpression**,** click the “Import” to import the media.

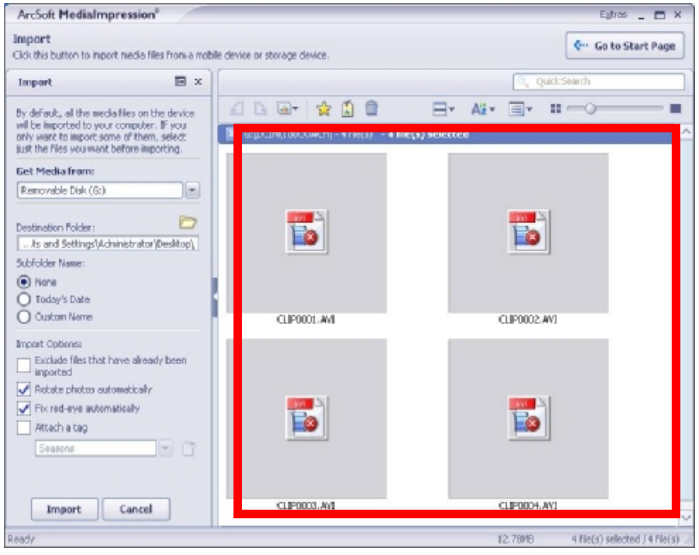
ArcSoft MediaImpression
Welcome to ArcSoft MediaImpression.
Choose a media type or action from the options below.
Pictures
Music
Video
All Media
Import
Welcome to ArcSoft MediaImpression. You can conveniently manage your media content and create projects here. Click a button on the left to get started.
Skip this page when you launch the program

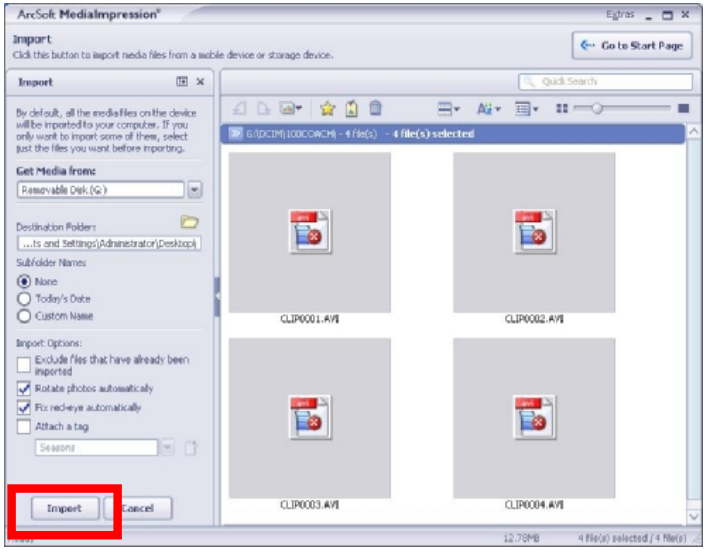
Choose the video camera storage and choose the output location.





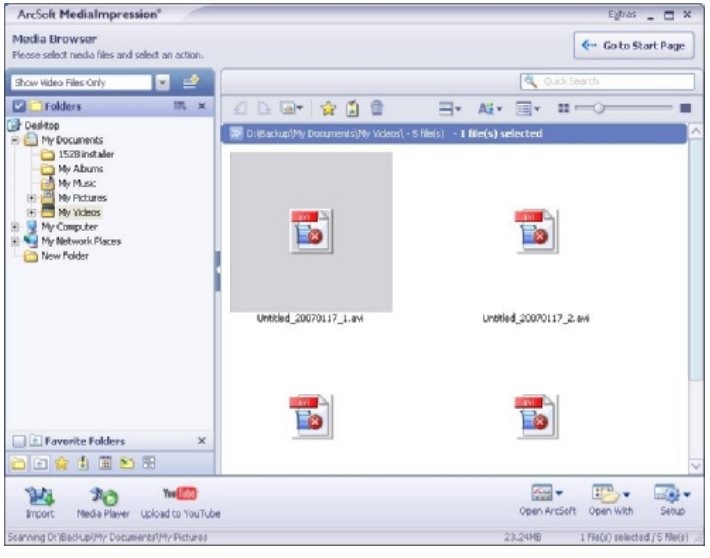
Choose require file and click the import, selected file will be stored in the output location.



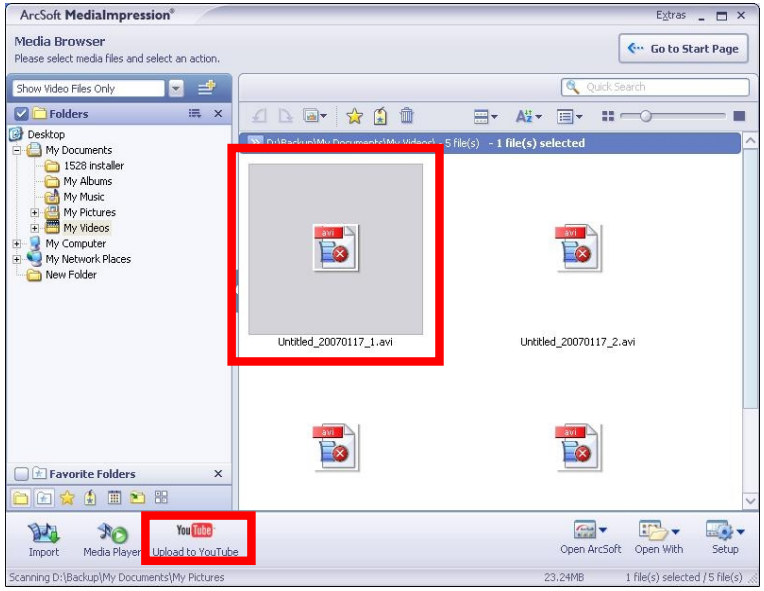


Click “Go to start page” to return the main screen, click the “Video” or “All media” to use the “YouTube” function.

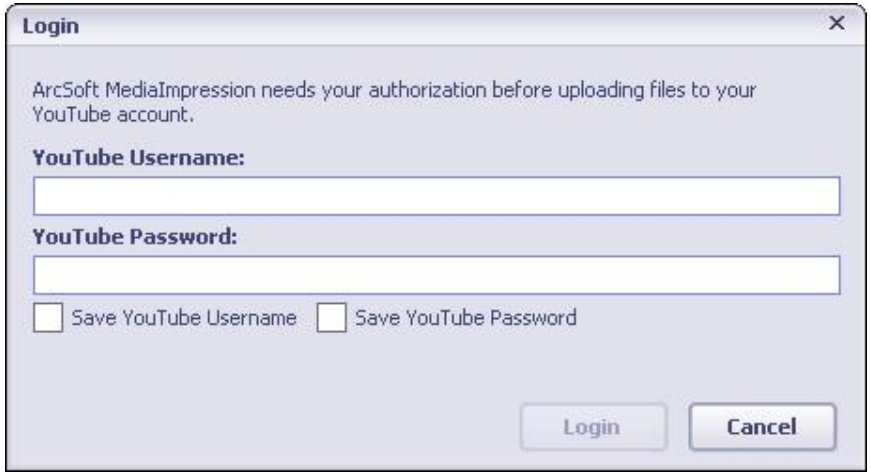
ArcSoft MediaImpression
Welcome to ArcSoft MediaImpression.
Choose a media type or action from the options below.
Pictures
Video
All Media
Import
Welcome to ArcSoft MediaImpression. You can conveniently manage your media content and create projects here. Click a button on the left to get started.
Skip this page when you launch the program



Choose file and click the “upload to YouTube.



Enter your username and password to login the YouTube, execute upload.



Product specifications:

Resolution	Video: HD(1280x720), VGA(640x480) Still photo: 5M(2592x1944), 3.1M(2048X1536), 1.3M(1280x960)
Function mode	Video Recording, Still photo taking, Playback
Lens	F2.8, f=3.1mm
Focus range	120cm~infinity
Digital focusing	4×
Shutter	Electronic
LCD display	2.0 inch TFT Display
White balance	Automatic
Exposure	Automatic
File format	MOV
Video out	TV out, HD TV out
Internal memory	Min. 16MB
Storage media	SD/MMC/SDHC card (max. 8GB)
USB port	USB2.0 port
Dimension (LxWxH)	110mm × 57mm × 19.5mm